

Evaluation of Ultra Blazer® for the control of tumble mustard in ‘Windham’ fall-sown peas

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Fall-sown peas are emerging as a rotation crop in the intermediate and low rainfall regions of eastern WA. In addition to helping break pest cycles in winter wheat-fallow cropping systems, peas also require less nitrogen input than winter wheat. Although it is generally easier to control grass weeds in peas than in wheat, the control of broadleaf weeds in peas is more difficult. Previous work by Howard Nelson, with Highline Grain Growers Inc., had indicated that Ultra Blazer (acifluorfen), a protox inhibitor (Group



14), provided good postemergence control of tumble mustard in fall-sown peas with acceptable levels of crop injury. The objective of our study was to evaluate Ultra Blazer at two rates (12 and 16 fl oz of product/A) and with various tank mixes for the postemergence control of tumble mustard in fall-sown peas.

The Lind Dryland Research Station was the site chosen for this study and the field was previously in tilled fallow. The soil at this site is a Shano silt loam with 1.1% organic matter and a pH of 6.4. On September 1, 2017, ‘Windham’ fall-sown peas were seeded at 120 lb/A with a custom built deep furrow drill equipped with a Valmar seed box. Row openers were on a 17-inch spacing and seeds were placed 2 inches into moisture with a total soil cover of 5 to 7 inches. Postemergence treatments were applied on April 4, 2018 with a CO₂-powered backpack sprayer set to deliver 15 gpa at 46 psi at 2.3 mph. The applications were made with winds out of the south at 5 mph, air temperature of 45°F and relative humidity of 54%. At the time of application, the fall-sown peas had 10 to 11 pairs of leaves. Tumble mustard rosettes were 0.5 to 2.0 inches in diameter.

The addition of NIS (0.25% v/v) to Ultra Blazer at either the 12 fl oz or 16 fl oz/A rate caused more early crop injury than applying Ultra Blazer alone. Early crop injury was similar for all treatments containing Ultra Blazer plus NIS. Crop injury was short lived in this study and had disappeared before the plants began to flower. All treatments in this study, except Vulture + COC, provided excellent control of tumble mustard. Ultra Blazer provided similar control at the 12 fl oz and 16 fl oz rates. The addition of NIS to Ultra Blazer did not improve the control of tumble mustard, but did increase crop injury. Ultra Blazer is not currently labeled for use in fall-sown peas, but our results suggest that should the manufacturer decide to label the product, it could provide effective postemergence control of tumble mustard with little risk for crop injury if NIS is not added.

Treatment	Rate	Crop injury		Tumble mustard control	
		4/11	4/20	4/20	5/2
	fl oz/A	-----0-100%-----		-----0-100%-----	
Nontreated Check	--	--	--	--	--
Vulture™ + COC	4.0 + 1.0% v/v	0 a ¹	0 a	55 b	80 b
Rhomene® + Metribuzin 75DF + NIS	12 + 5.33 oz + 0.25% v/v	8 b	5 a	95 a	100 a
Ultra Blazer	12	3 a	0 a	89 a	100 a
Ultra Blazer + NIS	12 + 0.25% v/v	18 de	5 a	91 a	100 a
Ultra Blazer + Metribuzin 75DF + NIS	12 + 5.33 oz + 0.25% v/v	14 cd	3 a	95 a	100 a
Ultra Blazer + Rhomene + NIS	12 + 12 + 0.25% v/v	14 cd	8 a	91 a	100 a
Ultra Blazer	16	1 a	1 a	91 a	100 a
Ultra Blazer + NIS	16 + 0.25% v/v	18 de	8 a	95 a	100 a
Ultra Blazer + Metribuzin 75DF + NIS	16 + 5.33 oz + 0.25% v/v	11 bc	4 a	94 a	100 a
Ultra Blazer + Rhomene + NIS	16 + 12 + 0.25% v/v	19 e	8 a	93 a	100 a

¹ Means, based on four replicates, within a column, followed by the same letter are not significantly different at P = 0.05 as determined by Fisher's protected LSD test, which means that we are not confident that the difference is the result of treatment rather than experimental error or random variation associated with the experiment.

Disclaimer

Some of the pesticides discussed in this presentation were tested under an experimental use permit granted by WSDA. Application of a pesticide to a crop or site that is not on the label is a violation of pesticide law and may subject the applicator to civil penalties up to \$7,500. In addition, such an application may also result in illegal residues that could subject the crop to seizure or embargo action by WSDA and/or the U.S. Food and Drug Administration. It is your responsibility to check the label before using the product to ensure lawful use and obtain all necessary permits in advance.